

Statement of Work

PROJECT TITLE: High voltage cable replacement at substation - U.S. Agency for Global Media, Thailand Transmitting Station, Rasom

SECTION C – DESCRIPTION/SPECIFICATION/WORK STATEMENT

C. Introduction

C.1 The U.S. Agency for Global Media, Thailand Transmitting Station, Rasom, is soliciting proposals for replacing the High voltage cable at substation. The existing High voltage cables feeders (2.4 KV) from tubular bus to VCB1 and VCB2 is about 50 years old. The condition are not good and some are burnt from operation. The existing underground RMC raceways might be bad from corrosion and carbon deposit from burning.

The Contractor shall provide all supervision, labor, materials, equipment, tools, services and any miscellaneous items necessary to perform the work as stated. All work is located at the U.S. Agency for Global Media Transmitting station site at Rasom, Ayutthaya Province, Thailand.

C.2 Design and review High voltage cable replacement at substation

C.2.1 The contractor shall design a standard cable raceways concrete trench (ref. NEC code article 390) for a group of 2.4 kv cables as detailed below:

- 3 each of 50 sq.mm. XLPE cable from tubular bus bar to VCB1
- 6 each of 240 sq.mm. XLPE cable from tubular bus bar to VCB2
- 6 each of 240 sq.mm. XLPE cable from VCB2 to voltage regulators
- 6 each of 240 sq.mm. XLPE cable from voltage regulators to fuse (FS-1)
(As shown in the attach pics)

The contractor shall provide drawings and submit to USAGM for approval before proceeding with the installation of these cables.

C.2.2 Build the concrete trench and install the cables raceway accessories as designed.

C.2.3 Installation of new cable system and testing

- 3 each of 50 sq.mm. XLPE cable from tubular bus bar to VCB1
- 6 each of 240 sq.mm. XLPE cable from tubular bus bar to VCB2
- 6 each of 240 sq.mm. XLPE cable from VCB2 to voltage regulators
- 6 each of 240 sq.mm. XLPE cable from voltage regulators to fuse (FS-1)

C.2.4 Removal & Replacement of existing cable system with new cable system

The contractor shall remove existing (old) cables and terminate the ends of the newly pulled cables to the terminals identified below:

- 3 each of 50 sq.mm. XLPE cable from tubular bus bar to VCB1
- 6 each of 240 sq.mm. XLPE cable from tubular bus bar to VCB2
- 6 each of 240 sq.mm. XLPE cable from VCB2 to voltage regulators
- 6 each of 240 sq.mm. XLPE cable from voltage regulators to fuse (FS-1)

C.2.5 Perform final test for all installed equipment as standard requirement.

- Pre-acceptance tests.

.1 After installing cable but before splicing and terminating, perform insulation resistance test with 1000 V megger on each phase conductor.

.2 Check insulation resistance after each splice and/or termination to ensure that cable system is ready for acceptance testing.

- Acceptance Tests

.1 Ensure that terminations and accessory equipment are disconnected.

.2 Ground shields, ground wires, metallic armour and conductors not under test.

.3 High Potential (Hi-pot) Testing. Conduct hi-pot testing at 100 % of original factory test voltage in accordance with manufacturer's recommendations.

.4 Leakage Current Testing.

4.1 Raise voltage in steps from zero to maximum values as specified by manufacturer for type of cable being tested.

4.2 Hold maximum voltage for specified time period by manufacturer.

4.3 Record leakage current at each step.

.5 Provide Owner's Representative with list of test results showing location at which each test was made, circuit tested and result of each test. Include results in Commissioning Manual.

.6 Remove and replace entire length of cable if cable fails to meet any of test criteria.

C.2.6 When work is completed, clean the area.

C.2.7 Submit the As Build Drawing to USAGM

C.2.8 The work shall be executed in a diligent manner in accordance with a negotiated firm fixed price and performance period. The period of performance for the project shall be completed in *45 calendar days* from the issuance of the Notice-to-Proceed.

D. NOTICE OF DELAY

If the Contractor becomes unable to complete the contract work at the time(s) specified in the awarded contract because of technical difficulties, notwithstanding the exercise of good faith and diligent efforts in the performance of the work called for hereunder, the Contractor shall give the Contracting Officer written notice of the anticipated delay and the reasons there-for. Such notice and reasons shall be delivered promptly after the condition creating the anticipated delay becomes known to the Contractor. When notice is so required, the Contracting Officer may extend the time specified in the Schedule for such period as deemed advisable.

E. SUBMISSION OF INVOICES

The Contractor shall submit invoices consisting of an original and one copy to the following address:

Station Manager
U.S. Agency for Global Media
Thailand Transmitting Station
Phen-Ban Dung Road
A. Ban Dung
Udon Thani 41190

F. SPECIAL CONTRACT REQUIREMENTS

F.1 INSURANCE

a) Personal Injury, Property Loss or Damage. The contractor hereby assumes absolute responsibility and liability for any and all personal injuries or death and/or property damage or losses suffered due to negligence of the contractor's personnel in the performance of the services required under this contract.

b) The Contractor agrees that the Government shall not be responsible for personal injuries or for damages to any property of the contractor, its officers, agents and employees, or any other person, arising from an incident to the contractor's performance of this contract. The Contractor shall hold harmless and indemnify the Government from and all claims arising there from, except in the instance of gross negligence on the part of the Government.

F.3 WORKING HOURS

The Contractor shall perform its site construction work during normal USAGM business hours, currently between 8:00 a.m. to 3:00 p.m. except on Thai and American holidays. Any on-site work by the Contractor outside of these hours must be coordinated in advance with, and approved in writing by, the Contracting Officer. All work must be completed for the day and all equipment returned to normal operating condition by 3:00 p.m. Exceptions granted by COR.

F.4 SAFETY REQUIREMENTS AND SUBMITTALS

1. Contractor will provide Personal Protective Equipment for his employees, as typically industry standards required for the work being performed.
2. Accident Reporting - A copy of each "Accident Report", which the Contractor or subcontractor submits to its insurance carriers, shall be forwarded to the Contracting Officer as soon as practicable, but in no event later than 7 calendar days after the date an accident occurs. All lost-time injuries to Contractor or subcontractor personnel during project construction require the Contractor to submit an Accident Report as stated above.

F.5 ON SITE PERSONNEL & SUPERVISION

1. At all times when any work is being performed on site, the Contractor shall have a Supervisor present and in charge of the work who has the capability of communicating in the English language, as well as the language of those performing the work. At any time the supervisor temporarily leaves the area of the work he shall designate an Acting Supervisor. The objective of this requirement is to have a designated person in charge of the work present at all times.

2. All work under this contract shall be performed in a skillful and workmanlike manner. All workmen shall wear shoes and proper clothing while accomplishing the work. The Contracting Officer may require, in writing, that the Contractor remove from the work any employee the Contracting Officer deems incompetent, careless, or otherwise objectionable.
3. There shall be no drugs, liquor, firearms, or explosives on the work site at any time. All departing Contractor vehicles and employees are subject to search.

F.6 STANDARDS OF CONDUCT

1. The Contractor shall maintain satisfactory standards of employee competency, conduct, cleanliness, appearance and integrity and shall be responsible for taking such disciplinary action with respect to employees as may be necessary. Each contractor employee is expected to adhere to standard of conduct that reflects credit on themselves, their employer, and the United States Government. The Government reserves the right to direct the contractor to remove an employee from the work site for failure to comply with the standards of conduct.
2. Disorderly conduct, use of abusive or offensive language, quarreling, intimidation by words, actions, or fighting shall not be condoned. Also included is participation in disruptive activities, which interfere with normal and efficient Government operations.
3. Intoxicants and Narcotics. The Contractor shall not allow its employees while on duty to possess, sell, consume, or be under the influence of intoxicants, drugs or substances which produce similar effects.

F.7 SITE SECURITY

1. The Contractor shall provide the names of all of its personnel working on-site to the Contracting Officer within 5 workdays after issuance of the Notice-To-Proceed by the Government.
2. Employees shall wear a uniform such as shirts or USAGM approved ID badge identifying them as part of this contract.
3. The Contractor shall be fully responsible for site security of its materials and work from theft, fire, and vandalism.

F.8 CONTRACTOR'S USE OF USAGM SITE

1. USAGM will occupy and conduct normal business operations at the site during the entire contract performance period. Any work by the Contractor that could cause a disruption of normal operations must be coordinated with and approved by the Contracting Officer's Representative.
2. The Contractor's use of the USAGM managed premises shall be limited to the immediate areas where the work is being performed and reasonable access routes to these areas. Use of toilet facilities, canteens, etc., at the existing station shall be as approved by the Contracting Officer's Representative.
3. During the contract performance period there may be other projects and Contractors working on these sites. Interface with such projects and Contractors shall be coordinated with the Contracting Officer's Representative.

END OF STATEMENT OF WORK